

REMARKS

Claims 1 and 3-5 were examined in the Office Action mailed June 20, 2007, with claim 6 standing withdrawn pursuant to Election/Restriction Requirement.

Claims 1 and 3-5 stand rejected under 35 U.S.C. § 103(a) as unpatentable over German Patent No. 35 07 638 to Hoffelner, *et al.* ("Hoffelner") in view of U.S. Patent No. 5,961,279 to Ingistov ("Ingistov").

As previously noted, the present invention is directed to a novel arrangement for sealing a gap between an end of a shaft and an adjacent housing, in which an *axially displaceable* annular brush seal seals against a tapered, radially outer surface of the shaft. This arrangement provides a brush seal that is readily adjustable to provide a desired gap at initial installation, thereby avoiding the need for costly, highly precisely dimensionally-controlled brush seal. The brush seal also may be quickly and easily adjusted to accommodate brush wear, etc., during the seal's life, thereby saving large maintenance costs and minimizing unprofitable machinery down-time. Specification at ¶¶ [0010]-[0012].

The Cited References: Hoffelner is cited as disclosing a sealing arrangement in which an axially-stationary tapered shaft 2 rotates within a brush seal 4. June 20, 2007 Office Action at 2 (citing Hoffelner Fig. 1c). Hoffelner is acknowledged to not disclose an axially-displaceable. *Id.* at 3.

Ingistov is cited as disclosing a first component (brush holder 48, 50 or 32') which is asserted to be axially displaceable with respect to a second component

(rotor 24). The Applicants respectfully submit that the Ingistov brush seal is a *fixed* brush seal arrangement, with no provision for axial adjustment. This is consistent with the Ingistov's brush seal sealing a gap to a straight portion of its rotor 24 (*i.e.*, there is no need to provide axial adjustment, because the Ingistov rotor is the same diameter regardless of the axial position of the brush seal).

Ingistov itself confirms that this reference does not disclose or suggest an axially-adjustable first component for axially adjusting the position of a brush seal:

... a retainer plate 48 holds the brush seal 40 *in a fixed relation to barrel member 18* by interlocking arrangement with a counterpart of the insert ring, designated adaptor ring 32', ... The retainer plate 48 is fastened to the insert ring 32' by a plurality of threaded fasteners 50.

Ingistov at 5:19-26 (emphasis added); Figs. 4-5. There is simply nothing in this reference which begins to suggest that adapter ring 32' (or any other member of the fixed brush seal holder) is in any way axially-adjustable; the screws 50 hold the retainer plate 48 in fixed relation to the insert ring 32', there is no suggestion of any adjustability in the way the screws 50 thread into their fixed positions in insert ring 32', and there is no mechanism shown or suggested for axial displacement between insert ring 32' and/or the member 18 in which the ring sits with a surrounding casing. *Id.*

Because Ingistov does not provide any disclosure or suggestion of an axially displaceable brush seal, one of ordinary skill in the art would have had no motivation to combine this reference with Hoffelner to obtain the present invention. Accordingly, because no combination of Hoffelner and Ingistov would

result in “a brush seal which is arranged fixedly in the first component of the two components ... with the first component being axially displaceable and adjustable with respect to the second component ... [and having] means for axial displacement and adjustment being provided between the first component and a casing surrounding the first component,” a *prima facie* case of obviousness has not been established. Pending independent claim 1 and its dependent claims 3-5 therefore are patentable over Hoffelner and Ingistov under § 103(a).

Reconsideration and withdrawal of the pending § 103(a) rejection of claims 1 and 3-5 is respectfully requested.

CONCLUSION

In view of the foregoing remarks, the Applicants respectfully submit that claims 1 and 3-5 are in condition allowance. Issuance of a Notice of Allowance for claims 1 and 3-5 is respectfully requested.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit

Account No. 05-1323 (Docket #011235.55710US).

October 10, 2007

Respectfully submitted,

A handwritten signature in black ink, appearing to read "R. Grabarek, Jr.", written over a horizontal line.

Robert L. Grabarek, Jr.
Registration No. 40,625
Mark H. Neblett
Registration No. 42,028

CROWELL & MORING LLP
Intellectual Property Group
P.O. Box 14300
Washington, DC 20044-4300
Telephone No.: (202) 624-2500
Facsimile No.: (202) 628-8844